

20000105.ba v02\_n769.bam.20000105

>From ???@??? Wed Jan 5 16:38:07 2000 -0600  
Message-Id: <200001052233.e05MX3W26531@sco.theporch.com>  
Date: Wed, 5 Jan 2000 16:32:10 CST  
From: Old Tube Radios <boatanchors@theporch.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: BOATANCHORS digest 2769

BOATANCHORS Digest 2769

Topics covered in this issue include:

- 1) URM-25D.....disaster strikes!  
by Arden Allen <gumbear@pacbell.net>
- 2) Homebrew DC Powered Firetube TX?  
by "DavidC" <eDoc@netzero.net>
- 3) Re: Ted Rogers Sr, 3BP, and his AC tube  
by "Steve" <scb@internettpport.net>
- 4) URM-25D.....sweet revenge  
by Arden Allen <gumbear@pacbell.net>
- 5) BUD TRANSMITTER KIT ??  
by Allan Culbert <Allan-Culbert@uiowa.edu>
- 6) Tubes with 12 or 28 v Plates?  
by "DavidC" <eDoc@netzero.net>
- 7) Re: Ted Rogers Sr, 3BP, and his AC tube  
by Deane D McIntyre <dmcintyr@ucalgary.ca>
- 8) ADMINISTRIVIA: Using The Archives  
by listown@jackatak.theporch.com (Mail List Owner)
- 9) Re: BUD TRANSMITTER KIT ??  
by JACK Iverson <jackiv@juno.com>
- 10) Military connector guy?  
by "Benjamin D. Hall" <kd5byb@WT.NET>
- 11) patch cables  
by Avery Comarow <acomarow@usnews.com>
- 12) Re 12-24 volt tubes  
by philip mccooy <dgnova@erols.com>
- 13) Re: patch cables  
by Arden Allen <gumbear@pacbell.net>
- 14) WTB: HF coils for NC-200  
by w1nml@juno.com
- 15) Running tubes at low B+  
by Richard Post <post@ouvaxa.cats.ohiou.edu>
- 16) Re: Chuck's safety hints, my comments and additions.  
by "Prof. Arthur I. Larky" <ail0@lehigh.edu>
- 17) Re: Chuck's safety hints, my comments and additions.  
by "Prof. Arthur I. Larky" <ail0@lehigh.edu>
- 18) Re: Chuck's safety hints, my comments and additions.

by Bob Roehrig <broehrig@admin.aurora.edu>

-----  
Date: Tue, 04 Jan 2000 18:57:43 -0800  
From: Arden Allen <gumbear@pacbell.net>  
Subject: URM-25D.....disaster strikes!  
To: Old Tube Radios <boatanchors@theporch.com>  
Message-id: <0FNU00HRUDL4JO@mta4.snfc21.pbi.net>  
MIME-version: 1.0  
Content-type: text/plain; charset=ISO-8859-1  
Content-transfer-encoding: 7bit

It was going oh so beautifully. The reburbed RF section of the generator was nicely burning in until the buffer tube, a 6AH6 decided to go south. It took with it the 2 microhenry plate choke and 470 ohm series plate resistor. With the Eico capable of pumping out more than 200 mA there was quite a fire, scorching the wiring board and melting wire insulation on the adjacent harness. I suppose the tube went gassy as there was no component failure that could have caused the problem. The tube had tested like new. Inside it looks like a lightening bolt had struck the plate and suppressor, lots of molten metal. Lesson learned: Don't go away and stuff your face until you are sure all is going well. I won't get hungry for a while (I feel like throwing up) so back to work I go.

Arden Allen KB6NAX Vallejo, CA gumbear@pacbell.net

-----  
Message-ID: <049801bf572f\$1f1962a0\$063f0404@oemcomputer>  
From: "DavidC" <eDoc@netzero.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Homebrew DC Powered Firetube TX?  
Date: Tue, 4 Jan 2000 22:44:06 -0500  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Does anyone have an all-DC powered design for a firetube HF TX for AM/CW? I am guessing such is possible if the output is under 10 watts?

Something along the idea of the old 6L6 transmitter,  
<http://pages.cthome.net/nord/6l6.htm>  
perhaps with more than one tube but using 12 or 28vdc?

I'd like to try something alongside the R-392 ... but not quite as massive in size and power requirements as the T-195!

Should I stick to solid state or just use the AF-67 or Morrow MB-560 for this purpose? I'd really like to homebrew a TX.

- Thanks! & 73, DavidC K1YP

\*\*\*\*\*

-----  
NetZero - Defenders of the Free World  
Get your FREE Internet Access and Email at  
<http://www.netzero.net/download/index.html>

-----  
From: "Steve" <scb@internettpport.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Date: Wed, 5 Jan 2000 00:45:39 +0000  
MIME-Version: 1.0  
Content-type: text/plain; charset=US-ASCII  
Content-transfer-encoding: 7BIT  
Subject: Re: Ted Rogers Sr, 3BP, and his AC tube  
CC: boatanchors@theporch.com  
Message-id:  
<20000105004612.5daee164c18111d3b9b3005004ae2433.in@iaig.internettpport.net>

>" I think that Rogers tube was licensed in Canada first by a US company  
> called McCullough (not Eimac) then later by another US company Kellog  
> switchboard. A Cincinnati company, Cleartone, built a TRF set with  
> them. Incidentally called the "model 110."

Greetings;

Your statement is a bit ambiguous. Are you saying the tube was actually by McCullough and Rogers got the Canadian Rights to use it? I thought the Rogers Batteryless predated the Kellog tube, and as I remember the Rogers from old ads I saw some 40 yrs ago, I am interested to know the real story. BTW, Did Rogers use the Raytheon BH for HV or a hot Fil diode?

I understand the Kellog 401 was offered as a nearly direct replacement for the '01A, allowing the use of a line operated PS to "electrify" the normally battery operated sets of the mid 1920s. The "Trolley" wires went to an AC Heater winding. Raytheon concurrently had a (Type BH) cold cathode HV rectifier for B-battery eliminators, which took care of the other end of things in an AC powered set. Some additional modifications would also be required as these sets originally allowed control of the gain of the RF and AF stages by

varying the '01A filament voltages with rheostats.

The early Sparton AC TRF sets are the only radios I've personally seen intended to use Kellogg tubes. It's possible these may have been their previous battery designs "modernized" with ganged "single-dial" tuning and the Kellogg tubes with an AC supply. Later on, Sparton used "Cardon" brand tubes with oddball heater voltages in the "Equasonne" pretuned broadband RF amp series (bet they didn't have to pay anyone royalties on this one) before capitulating to an industry standard tubeset and normal superhet config.

Regards; Steve.

-----  
Date: Wed, 05 Jan 2000 02:55:44 -0800  
From: Arden Allen <gumbear@pacbell.net>  
Subject: URM-25D.....sweet revenge  
To: Old Tube Radios <boatanchors@theporch.com>  
Message-id: <0FNU00CIOZPIXG@mta2.snfc21.pbi.net>  
MIME-version: 1.0  
Content-type: text/plain; charset=ISO-8859-1  
Content-transfer-encoding: 7bit

Generator is working again (it's 2:29 AM). I found a 2 uH RFC in my cigar box collection and three resistors to replace the buffer amp fried plate and cathode resistors and the screen resistor for good measure. I carved the charred portion of the wiring board away with an X-acto knife. Lots of scrubbing to get rid of all of the soot.

This time I watched things for quite a while to be sure the new 6AH6 wasn't also the victim of voodoo magic. The harmonic rich output was much improved when I connected a 50 ohm load to the amplifier output simulating the output attenuator load. The waveforms were reasonably good approximations of sine waves on all bands. The amplifier frequency compensation networks only operate properly when the amp is properly loaded. Hmmmmmm, how long have I been at this????

While the body worked the brain whirred along trying to overcome the grief, "how do I prevent a similar situation from occurring in the future"? (does lightning strike twice in the same place?). As if by the hand of the Big Guy the answer was sitting on my bench in the form of a HP 428B clamp-on current meter, just two weeks in its new home. I was wondering what I would use it for when I got it, it was such a great deal, you know. The 428B has a voltage output BNC on it, the output voltage being proportional to meter deflection. All I need to do is build an adjustable threshold circuit breaker, connect it to the output of the current meter, plug the power supply into the circuit breaker, clamp the current probe onto the power supply B+ lead and set the threshold to trip at about 125% of the

current consumption of the circuit under test. Something goes wrong and the lashup shuts everything down. Another project for the pile.....

I'm going to bed.

Arden Allen KB6NAX Vallejo, CA gumbear@pacbell.net

-----  
Message-Id: <3.0.1.32.20000105093322.006d5358@blue.weeg.uiowa.edu>  
Date: Wed, 05 Jan 2000 09:33:22 -0600  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Allan Culbert <Allan-Culbert@uiowa.edu>  
Subject: BUD TRANSMITTER KIT ??  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Fellow BA enthusiasts,

Does any one have any information about transmitter kits that Bud (the chassis and panel people) reportedly produced prior to WW II? Moore's transmitter book references them, but the information is extremely sketchy. I have found no ads in the 1939 - 40 QSTs by Bud.

I have what I suspect may have been one. I have not tried to reverse engineer a circuit, but the basics are:

standard rack panel size  
front panel symmetrically laid out  
crystal controlled with 5 pin socket on front panel  
oscillator has a 6J5 and a 5 pin coil ceramic socket  
PA is 807 and has a 5 pin plug ceramic socket for a tank coil  
plate milliammeter mounted in panel  
series of closed circuit jacks on rear panel presumably for measuring current of various stages  
speech amplifier and what could be a low level modulator  
self contained power supply using Thordarson transformer

No identification of any sort other than the little oval "BUD" sticker on the shield between oscillator and PA and under the chassis (black wrinkle). The panel has the little metal tags (power on / off, phone / cw, etc.) identifying the controls that were available in that era. It could be home designed, but the layout is almost too neat, very symmetrical, no extra holes from goofs, etc..

Any information would be greatly appreciated.

Al, K0AL

-----  
Message-ID: <021601bf5799\$9cd6d140\$273f0404@oemcomputer>  
From: "DavidC" <eDoc@netzero.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Tubes with 12 or 28 v Plates?  
Date: Wed, 5 Jan 2000 11:26:22 -0500  
MIME-Version: 1.0  
Content-Type: text/plain;  
        charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Can anyone tell me what tubes are useful in a TX  
application that are also efficient with 12 or 28vdc  
plates?

Cost and availability?

Simple AM/CW HF TX designs?

- Thanks! & 73, DavidC K1YP

\*\*\*\*\*

-----  
NetZero - Defenders of the Free World  
Get your FREE Internet Access and Email at  
<http://www.netzero.net/download/index.html>

-----  
Message-ID: <3873785B.10D6165D@ucalgary.ca>  
Date: Wed, 05 Jan 2000 09:59:08 -0700  
From: Deane D McIntyre <dmcintyr@ucalgary.ca>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Ted Rogers Sr, 3BP, and his AC tube  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Steve wrote:

>  
> > " I think that Rogers tube was licensed in Canada first by a US company  
> > called McCullough (not Eimac) then later by another US company Kellog

> > switchboard. A Cincinnati company, Cleartone, built a TRF set with  
> > them. Incidentally called the "model 110."

>

> Greetings;

>

> Your statement is a bit ambiguous. Are you saying the tube was actually  
> by McCullough and Rogers got the Canadian Rights to use it? I thought  
> the Rogers Batteryless predated the Kellogg tube, and as I remember the  
> Rogers from old ads I saw some 40 yrs ago, I am interested to know  
> the real story. BTW, Did Rogers use the Raytheon BH for HV or a hot  
> Fil diode?

>

> I understand the Kellogg 401 was offered as a nearly direct  
> replacement for the '01A, allowing the use of a line operated PS to  
> "electrify" the normally battery operated sets of the mid 1920s. The  
> "Trolley" wires went to an AC Heater winding. Raytheon concurrently  
> had a (Type BH) cold cathode HV rectifier for B-battery eliminators,  
> which took care of the other end of things in an AC powered set.  
> Some additional modifications would also be required as these sets  
> originally allowed control of the gain of the RF and AF stages by  
> varying the '01A filament voltages with rheostats.

>

> Regards; Steve.

Seeing as I started this thread I offer this abridged quote from Tyne's Saga  
of the Vacuum Tube: (p 348-350):

"Demands of set manufactures and public for an ac-operated radio began  
in the early 1920's and grew more persistent year by year. Here (i.e in  
the USA) and abroad intensive research was being carried out in laboratories  
to develop an ac tube. This urgent activity in that period makes one  
other independent

(i.e. not RCA or WE) tube particularly interesting. This tube was  
a Canadian product made by Edward Samuels Rogers, who in 1924, at the  
age of twenty-four, formed the Rogers Radio Company. Ltd., of Toronto,  
for the manufacture of radio receivers. While on a trip to the United  
States in that same year, Rogers visited an American Laboratory where  
he saw a small tube designed to be operated from ordinary household  
alternating current. When he went back to Toronto he took with him the  
Canadian patent rights to this tube"

"The tube he saw-the invention of Frederick S. McCullough-was far from  
perfect, being prone to produce excessive hum. During the fall of  
1924 Rogers succeeded in developing a better insulator for the heater, and  
presumably redesigned the heater so that the ac hum was greatly reduced.  
His first commercially practical ac tube was produced on August 26, 1925."

"Rogers established the Standard Radio Manufacturing Corporation in 1925 to manufacture a radio set using his tubes. Then, having his patent rights, improvements, production facilities and ready market, he launched the Rogers Batteryless Radio Receiving Set. This three tube receiver had a detector using regeneration and a two stage amplifier. It was equipped with Rogers Type 32 tubes (no relation to the battery 32 tube later introduced by RCA). An external B-eliminator was used to supply plate voltage. Accompanying each set was an instruction card stating that the set was "made by the Standard Radio Mfg. Corp. Ltd., Toronto (owner of the Canadian De Forest Patents)-under the patents of Canadian De Forest, Edward S. Rogers and F.S. McCullough".

A photo of the Rogers 32 in Tyne resembles the tube illustrated on the stamp (<http://deane.bio.ucalgary.ca/Rogers.jpg>)

Assuming that Rogers really did have his patents in order it would seem that the RCA UY-227 infringed the Rogers patents, not the other way around. But RCA was the Microsoft of its day.....

73, Deane D McIntyre VE6BP0  
dmcintyr@ucalgary.ca

-----  
Message-Id: <200001051715.e05HF1K17139@jackatak.theporch.com>  
From: listown@jackatak.theporch.com (Mail List Owner)  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: ADMINISTRIVIA: Using The Archives  
Date: Wed, 5 Jan 100 11:15:01 CST

Gang-

!!!THIS INFORMATION HAS CHANGED!!!!

!!!SAVE THIS FILE FOR FUTURE REFERENCE!!!!!!

This periodic post is designed to help everyone gain more value from their boatanchors subscription.

Often I receive an email request, or I read on the list, of someone who is aware there is an archive available with some special files with special information that is of a more permanent nature than a post to the list, but who is unaware of how to retrieve these gems.

In the archives, there are cross-reference tables for Tubes, Military Equipment Nomenclature, suggestions for restorations and modifications to our beloved fire bottle rigs, and some wonderful stories of real adventures and the people involved.



These files may be accessed by the Web... quickly and easily.  
These files can also be accessed by email.

For WWW access:

- go to <http://www.theporch.com>
- select "ListProc Web Interface"
- on your first time there, click "Register For Full Account"
- follow the instructions, and BE SURE you use the email address that you have your BoatAnchors mail addressed to -- this interface will work ONLY for members of the list!

Once registered, you can:

- search the archives of previous posts (so far we haven't loaded all the previous posts online, but that is in the works;
- download the index of files;
- retrieve individual files
- manage your subscription via the web interface

AWESOME!

For email access:

Step One:

- send an email (leave the subject blank, or, if your mailer requires a subject, type a single character, like "a" in the subject box) to:

[listproc@sco.theporch.com](mailto:listproc@sco.theporch.com)

Step Two:

- in the body type:  
index boatanchors

NOTE: The index \*includes\* all the previous articles now available through the web interface, so the index is HUGE and difficult to search -- the web interface is much easier.

Step Three:

- after checking out the index for files of interest, and finding the one or more you want to have sent to you, send another email to:

[listproc@sco.theporch.com](mailto:listproc@sco.theporch.com)

- and, in the body, type:  
get boatanchors file.name

- where you substitute the name of the file from the index for "file.name"

This should get you off to a good start. If you encounter any problems, please let me know at the address below.

--

73

Jack, W4KH/Mobile - - - Mailing List Archiver/Owner - - -  
listown@jackatak.theporch.com - "Plus ca change, plus c'est la meme chose"  
"Il n'y a que les idiots qui ne changent jamais d'idee"  
Wed Jan 5 11:15:00 CST 2000

-----  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: boatanchors@theporch.com  
Date: Wed, 5 Jan 2000 12:06:18 -0600  
Subject: Re: BUD TRANSMITTER KIT ??  
Message-ID: <20000105.120620.-285725.10.jackiv@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain  
Content-Transfer-Encoding: 7bit  
From: JACK Iverson <jackiv@juno.com>

I think that the presence of a bud logo on the metal pieces you see do not infer that the unit is a Bud kit, all of the Bud metal thingies had that decal. Bud did sell some foundation chassis kits, and in my archives I may find something, memery aint to gud.  
old jack

On Wed, 05 Jan 2000 09:33:22 -0600 Allan Culbert  
<Allan-Culbert@uiowa.edu> writes:  
> Fellow BA enthusiasts,  
>  
> Does any one have any information about transmitter kits that Bud  
> (the  
> chassis and panel people) reportedly produced prior to WW II?  
> Moore's  
> transmitter book references them, but the information is extremely  
> sketchy.  
> I have found no ads in the 1939 - 40 QSTs by Bud.  
>  
> I have what I suspect may have been one. I have not tried to reverse  
> engineer a circuit, but the basics are:  
>  
> standard rack panel size  
> front panel symmetrically laid out  
> crystal controlled with 5 pin socket on front panel  
> oscillator has a 6J5 and a 5 pin coil ceramic socket  
> PA is 807 and has a 5 pin plug ceramic socket for a tank coil  
> plate milliammeter mounted in panel  
> series of closed circuit jacks on rear panel presumably for  
> measuring  
> current of various stages  
> speech amplifier and what could be a low level modulator

> self contained power supply using Thordarson transformer  
>  
>  
> No identification of any sort other than the little oval "BUD"  
> sticker on  
> the shield between oscillator and PA and under the chassis (black  
> wrinkle).  
> The panel has the little metal tags (power on / off, phone / cw,  
> etc.)  
> identifying the controls that were available in that era. It could  
> be home  
> designed, but the layout is almost too neat, very symmetrical, no  
> extra  
> holes from goofs, etc..  
>  
> Any information would be greatly appreciated.  
>  
> 73  
>  
> Al, K0AL  
>

Jack Iverson      K0EWU      jackiv@juno.com  
ARRL, IEEE LM, RCA, AMI, ARCI, QCWA, CCA, OOTC.

-----  
Message-Id: <3.0.32.20000105123317.007b67e0@mail.wt.net>  
Date: Wed, 05 Jan 2000 12:33:21 -0600  
To: Old Tube Radios <boatanchors@theporch.com>  
From: "Benjamin D. Hall" <kd5byb@WT.NET>  
Subject: Military connector guy?  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Greetings all...

About four or five months ago, a gentleman offered his services as a source of military connectors for military boatanchor radios. Would the aforementioned gentleman please contact me direct?

I have a need for one of those crazy military multi-pinned circular connectors and the usual suspects have turned up zilch...

thanks and 73,  
Ben

---

Benjamin D. Hall, KD5BYB, Engine and radio collector / operator.  
Located in Houston, Texas, USA.

e-mail: kd5byb@WT.net, web: <http://web.wt.net/~kd5byb/>  
"An ye harm none, do what thou wilt."

-----  
Message-Id: <2.2.32.20000105192040.00914c40@ntpop.usnews.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Date: Wed, 05 Jan 2000 14:20:40 -0500  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Avery Comarow <acomarow@usnews.com>  
Subject: patch cables  
Cc: dcboatanchors@qth.net

Question:

Radioshack.com, which used to be known as TechAmerica, has BNC-to-BNC coax patch cables in the latest catalog supplement at half the usual price (\$3 for a 3-foot cable, \$5 for 10 feet, \$7.50 for 25 feet...). They look real nice, with molded boots. They are advertised as for use with Ethernet 10Base-2.

The coax is RG-58.

So here's my question: Is 52 ohms okay for patch cords used at HF in old rigs, test lashups, etc.?

73, Avery W3AVE

-----  
Message-ID: <3873A042.308F31F8@erols.com>  
Date: Wed, 05 Jan 2000 14:49:22 -0500  
From: philip mccooy <dgnova@erols.com>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re 12-24 volt tubes  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

With regard to using 28 volt tubes for transmitting, the best one I can think of is the 28D7. This is a dual pentode, designed to run on 28 volts plate and filament voltage. Plate dissipation per tube is 3 watts. This is a sylvania tube.

A 25L6 might do something with 28 volts on the plate.

There are plenty of 12 volt tubes (Plate and filament) but they are only good

for receiving. Were used in 12 volt car radios.

-----  
Date: Wed, 05 Jan 2000 13:08:20 -0800  
From: Arden Allen <gumbear@pacbell.net>  
Subject: Re: patch cables  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: dcboatanchors@qth.net  
Message-id: <0FNV00K17S4NBE@mta4.snfc21.pbi.net>  
MIME-version: 1.0  
Content-type: text/plain; charset=ISO-8859-1  
Content-transfer-encoding: 7bit

Hi Av;

> So here's my question: Is 52 ohms okay for patch cords used at HF in old  
> rigs, test lashups, etc.?

No problemo. Buy enough for all of us. Happy NuK.

Arden Allen KB6NAX Vallejo, CA gumbear@pacbell.net

-----  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: WTB: HF coils for NC-200  
Message-ID: <20000105.145319.185.0.w1nml@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain  
Content-Transfer-Encoding: 7bit  
From: w1nml@juno.com  
Date: Wed, 05 Jan 2000 17:00:53 EST

Gang-

I'm in need of the HF coils from a National NC-200 receiver. Would also consider a parts receiver. Thanks for any help.

Lock Pingree W1NML/7

-----  
YOU'RE PAYING TOO MUCH FOR THE INTERNET!  
Juno now offers FREE Internet Access!  
Try it today - there's no risk! For your FREE software, visit:  
<http://dl.www.juno.com/get/tagj>.

-----  
Message-Id: <v03007803b49956e1f1a2@[132.235.46.198]>  
Mime-Version: 1.0

Content-Type: text/enriched; charset="us-ascii"  
Content-Transfer-Encoding: quoted-printable  
Date: Wed, 5 Jan 2000 17:04:08 -0500  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Richard Post <post@ouvaxa.cats.ohiou.edu>  
Subject: Running tubes at low B+

Phil Mccoy's inquiry on 12-24 volt tubes reminded me of a little experiment I did when working on my National NC-173. =20

I often will pull the rectifier and power a receiver's B+ with an external variable supply to gently reform the caps while watching the vital signs. With that hook-up, I tried an experiment to see how little B+ I could get away with to run the receiver.

The NC-173 accompanied the Thor Heyerdahl "Kon-Tiki" expedition according to an ad by National in the September 1947 Radio-News. The expedition used batteries to power this receiver and as well as an HR0-7. In checking power requirements for this receiver, I was a bit surprised that they could run it on batteries. Other than the filament requirements however, I found I could still get adequate speaker volume on international short-wave broadcasts with only about 35 to 40 volts of B+. The current draw at 35 volts of B+ was only about 11 milliamps.=20 I am sure this can be done with other receivers of this type, but reading the ad aroused my curiosity and I was rather surprised by the result. =20

Have not added the NC-173 to my webpage as yet. The paint job looks as if it accompanied Heyerdahl's expedition :-)

73,

Rich

[illegible]

Boatanchor Pix website - KB8TAD

<http://oak.cats.ohiou.edu/~postr/bapix/> =20

mailto:postr@ohiou.edu

</fontfamily>

-----  
Message-ID: <38737CA4.D81@lehigh.edu>  
Date: Wed, 05 Jan 2000 17:17:24 +0000  
From: "Prof. Arthur I. Larky" <ail0@lehigh.edu>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Chuck's safety hints, my comments and additions.  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

I just started working on a SP-600JX21 that I acquired. I noticed that one leg of the line cord was broken at the entrance to the chassis and decided to investigate further. I found that the wire at the plug end of the cord had lost its insulation on one side so that both wires were bare and exposed. The other side of the plug was okay, so a un-observant person would have been touching both legs of the 110 when plugging in the cord. Of course, I was planning to replace the cord with a 3-wire one from my heap of computer cords. I also examined the schematic and the wiring and found out that one leg (which shall be called the 'hot' leg) went through the fuse and directly to the power transformer. The other leg (the 'neutral' leg) went through the power switch to the other side of the transformer!! Imagine what would happen if some touched the chassis of the (now grounded) chassis and one of the taps on the power transformer primary. Restoration to original condition will have to take a back seat to safety - I shall rewire the power switch to be in series with the fuse and connect the neutral leg directly to the power transformer.

Any objections to this from cooler heads?

Thanks,

Art K3HBA

PS: what's the consensus? hot lead to switch to fuse to xformer OR hot lead to fuse to switch to xformer? My vote is for the first one.

Art

-----  
Message-ID: <38737F4F.74E2@lehigh.edu>  
Date: Wed, 05 Jan 2000 17:28:47 +0000  
From: "Prof. Arthur I. Larky" <ail0@lehigh.edu>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
CC: boatanchors@theporch.com  
Subject: Re: Chuck's safety hints, my comments and additions.  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Brian Goldsmith wrote:

>  
> Tom Norris wrote:-  
>  
> What is amazing is that many pieces of multi K\$  
> gear come in NEW for acceptance testing and are found to be  
> neutral fused!  
>  
> Tom, what you say makes sense except for one thing. Why on earth would  
> anyone (including those who have some or any technical training) assume that  
> in any given piece of electrically operated equipment, the "hot" wiring is of  
> colour A or B or that it SHOULD have been connected to the large terminal or  
> to the small terminal or whatever! In any piece of electrically operated  
> equipment it must be assumed that ANY wire is hot with respect to  
> ground. Follow this rule and you don't have to worry about what any  
> manufacturer (or electrician) might or might not have done.  
>

We do have a National Electric Code which specifies such things. You would expect USA-made equipment to be up to code. (Not older stuff, since 3-wire plugs are only 50 years old.) But I like to un=plug stuff before I stick my fingers into them.

However, I also remember when a student let the back of an instrument touch a ground and the resultant arc burned the corner off of the case. We discovered that the electrical contractor who wired the wireway in the lab relied on the mounting screws to ground the outlets instead of bonding them to the green (ground) wire. Both the mounting brackets and the wireway were very nicely painted. This little bit of laziness made the ground pin, and hence the instrument, 55 volts above ground. (We had very peculiar wiring in the building left over from some 2-phase stuff.)

I insisted that the labs all be re-wired. Knowing the mentality of the bosses, I imagine they paid the electricians for doing the job right instead of insisting that they do it for free.

Art K3HBA

-----  
Date: Wed, 5 Jan 2000 16:25:12 -0600 (CST)  
From: Bob Roehrig <broehrig@admin.aurora.edu>  
To: Old Tube Radios <boatanchors@theporch.com>  
cc: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Chuck's safety hints, my comments and additions.  
Message-ID: <Pine.OSF.3.96.1000105162309.12843C-1000000@admin.aurora.edu>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Wed, 5 Jan 2000, Prof. Arthur I. Larky wrote:



> PS: what's the consensus? hot lead to switch to fuse to xformer OR hot  
> lead to fuse to switch to xformer? My vote is for the first one.

I usually rewire so hot goes to fuse, then switch, then "high" side of transformer. Neutral going directly to other side. The reason I would wire to the fuse first is for the chance of the switch breaking down to the chassis.

"Nostalgia is a thing of the past"

E-mail: broehrig@admin.aurora.edu or k9eui@arrl.net 73 de Bob, K9EUI

CIS: Data / Telecom Aurora University, Aurora, IL

630-844-4898 Fax 630-844-4222

-----

End of BOATANCHORS Digest 2769

\*\*\*\*\*